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IN THE CLAIMS

1. (Currently Amended) An automatic veterinary medicament delivery system, for delivery of at least one fluid medicament to an individual fowl, ovine, ~~[[procine]]~~ porcine or other animal ~~[[within a group]]~~, comprising:
 - a) a generally cylindrical, valve-free, hand-held injection device for delivery of the medicament; [[having a hollow needle for injecting a liquid;]]
 - b) tubing interconnecting said hand-held injection device in fluid communication with at least one liquid medicament;
 - c) a pump, in fluid communication with both said hand-held injection device and liquid medicament, said pump for forcing a medicament through said tubing to said hand-held injection device for delivery;
 - d) means for powering said pump; and
 - e) ~~[[means for deterring accidental self-injection by a user of said system]]~~ a headlamp, mounted on said hand-held gun, for illuminating the injection site.
2. (Currently amended) The system of claim 1, ~~[[wherein said]]~~ further comprising ~~[[means for deterring accidental self-injection by a user further comprise]]~~ an emergency stop button mounted on said hand-held injection device.
3. (Currently amended) The system of claim ~~[[1, wherein said means for deterring accidental self-injection by a user]]~~ 44, further ~~[[comprise]]~~ comprising a safety interlock, mounted on ~~[[said proximal]]~~ a distal surface of said hand-held injection device, extending longitudinally therefrom to a point even with said needle tip, said safety interlock urged to a second position, in response to said hand-held injection device being positioned adjacent an animal to be injected, where the needle

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is inserted completely in said animal body, where an extension of said safety interlock within the housing of said hand-held injection device closes a circuit actuating an injection.

4. (Original) The system of claim 1, further comprising means for precisely controlling the amount of a medicament administered.
5. (Original) The system of claim 4, said means for precisely controlling the amount of medicament administered further comprise a control unit where the dosage of the medicament to be administered is controlled by setting the number of pulses that are emitted by an electronic photo optic sensor in response to an amount of medicament passing therethrough.
6. (Currently amended) The system of claim 5, further comprising signal lights as means for readily indicating when ~~[[in injection]]~~ medicament administration is taking place.
7. (Currently amended) The system of claim 6, further comprising signal lights as means for indicating when the medicament fluid level is low.
8. (Withdrawn) The system of claim 7, further comprising means for automatically delivering two medicaments for injection simultaneously by the system.
9. (Currently amended) An automatic veterinary medicament delivery system, for delivery of at least one fluid medicament to an individual fowl, ovine, ~~[[procine]]~~ porcine or other animal within a group, comprising:
 - a) a generally cylindrical, valve-free, hand-held injection device ~~[[having a hollow needle for injecting a liquid,]]~~;
 - b) tubing interconnecting said hand-held injection device in fluid communication with at least one liquid medicament;

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- c) a pump, in fluid communication with both said hand-held injection device and liquid medicament, said pump for forcing a medicament through said tubing to said hand-held injection device for delivery;
- d) means for powering said pump;
- e) a headlamp, mounted on said hand-held gun, for illuminating the injection site;
- f) an emergency stop button mounted on said hand-held injection device as means for deterring accidental self-injection by a user of said system; and
- g) a control unit where the dosage of the medicament to be administered is controlled by setting the number of pulses that are emitted by an electronic photo optic sensor in response to an amount of medicament passing therethrough as means for precisely controlling the amount of a medicament administered.

10. (Currently amended) The system of claim 9, further comprising signal lights as means for readily indicating when in injection is taking place.

11. (Currently amended) The system of claim 10, further comprising signal lights as means for indicating when the medicament fluid level is low.

12. (Withdrawn) The system of claim 11, further comprising means for automatically delivering two medicaments for injection simultaneously by the system.

13. (Currently amended) An automatic veterinary medicament delivery system, for delivery of at least one fluid medicament to an individual fowl, ovine, ~~[[procine]]~~ porcine or other animal within a group, comprising:

- a) A generally cylindrical, valve-free, hand-held injection device having ~~[[a]]~~ at least one hollow needle for injecting a liquid,
- b) tubing interconnecting said hand-held injection device in fluid communication with

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- at least one liquid medicament;
 - c) a pump, in fluid communication with both said hand-held injection device and liquid medicament, said pump for forcing a medicament through said tubing to said hand-held injection device for delivery;
 - d) means for powering said pump;
 - e) a headlamp, mounted on said hand-held gun, for illuminating the injection site;
 - f) [[e]] a safety interlock, mounted on said proximal surface of said hand-held injection device, extending longitudinally therefrom to a point even with said needle tip, said safety interlock urged to a second position, in response to said hand-held injection device being positioned adjacent an animal to be injected, where the needle is inserted completely in said animal body, where an extension of said safety interlock within the housing of said hand-held injection device closes a circuit actuating an injection as means for deterring accidental self-injection by a user of said system;
- and
- g) [[f]] a control unit where the dosage of the medicament to be administered is controlled by setting the number of pulses that are emitted by an electronic photo optic sensor in response to an amount of medicament passing therethrough as means for precisely controlling the amount of a medicament administered.

14. (Original) The system of claim 13, wherein said control unit further comprises:

- a) a photo-optic sensor to control the volume of medicament fluid pumped by said pump;
- b) a circular encoder disc, having slots formed in said encoder disc placed at a calibrated distance from one another around the perimeter of said encoder disc;
- c) a drive shaft, driven by said pump, for driving said encoder disc wherein said slots pass between an emitter and a receiver of said photo-optic sensor permitting calibration of the amount of said medicament dispersed.

15. (Currently amended) The system of claim 14, further comprising signal lights as means for

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readily indicating when in injection is taking place.

16. (Currently amended) The system of claim 15, further comprising signal lights as means for indicating when the medicament fluid level is low.

17. (Withdrawn) The system of claim 16, further comprising means for automatically delivering two medicaments for injection simultaneously by the system.

18. (Currently amended) The system of claim 1, wherein a [[first]] hand-held injection device further includes:

- a) a trigger, in electrical communication with said pump, mounted on a dorsal surface of said device;
 - b) an emergency stop button mounted on a dorsal surface of said device as means for deterring accidental self-injection of the user; and
 - c) [[a head lamp mounted on the proximal surface of said device, for providing illumination in low light areas and as a further warning to the user to avoid self-injection; and]]
- [[d]] an injection in progress signal light mounted on said housing of said device.

19. (Currently amended) The system of claim 1, wherein a [[second]] hand-held injection device further includes:

- a) a trigger, in electrical communication with said pump, mounted on a dorsal surface of said device;
- b) an emergency stop button mounted on a dorsal surface of said device as means for accidental self-injection of the user;
- c) [[a head lamp mounted on the proximal surface of said device, for providing

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illumination in low light areas and further as a warning to the user to avoid self-injection;]]

[[d]]c an injection in progress signal light mounted on said housing of said device; and

[[e]] d optional dye marking means for [[conspicuously]] conspicuously marking an animal injected, simultaneously with the injection.

20. (Withdrawn) The system of claim 1, wherein a third hand-held injection device further includes:

- a) a second hollow needle, mounted on a proximal surface of said device, for injecting two medicaments simultaneously;
- b) a trigger, in electrical communication with said pump, mounted on a dorsal surface of said device;
- c) an emergency stop button mounted on a dorsal surface of said device as means for deterring accidental self-injection of the user;
- d) a head lamp mounted on the proximal surface of said device for providing illumination in low light areas and further as a warning to the user to avoid self-injection; and
- e) an injection in progress light mounted on said housing of said device.

21. (Currently amended) The system of claim 1, wherein a [[fourth]] hand-held injection device further includes:

- a) a trigger, in electrical communication with said pump, mounted on a pistol grip handle mounted on said device;
- b) a safety interlock mounted on the proximal surface of said device as means for deterring accidental self-injection of the user;

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- c) [[a head lamp mounted on the proximal surface of said device, for providing illumination in low light areas and further as a warning to the user to avoid self-injection;]]
- [d] an injection in progress light mounted on said housing of said device; and
- [d] optional dye marking means for conspicuously marking an animal injected, simultaneously with the injection.

22. (Original) The system of claim 18, 19, 20, or 21, wherein said hand-held injection device selected is installed for fluid connection with the system by means of a quick connect fluid coupler connecting to said pump.

23. (Currently amended) The system of claim 22, wherein said hand-held injection device selected is installed for electrical connection by means of an[[amp]] electrical connector to said control unit for powering said selected hand-held injection device.

24. (Original) The system of claim 23, wherein said control unit permits selecting appropriate doses to be delivered by said selected hand-held injection device.

25. (Original) The system of claim 24, wherein said control unit further comprises:

- a) a photo-optic sensor to control the volume of medicament fluid pumped by said pump;
- b) a circular encoder disc, having slots formed in said encoder disc placed at a calibrated distance from one another around the perimeter of said encoder disc;
- c) a drive shaft, driven by said pump, for driving said encoder disc wherein said slots pass between an emitter and a receiver of said photo-optic sensor permitting calibration of the amount of said medicament dispersed.

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26. (Canceled).

27. (Withdrawn) The system of claim 1, wherein two different medicaments are automatically mixed, by means of a mixing tube, to permit injection of two different medicaments in a single injection procedure.

28. (Withdrawn) The system of claim 27, wherein said mixing tube, for mixing two fluids, further comprises:

- a) a T-shaped coupling interconnecting said two fluid sources;
- b) a cylinder having a first, intake end and a second exit end; and
- c) a double helix-shaped fin retained within said cylinder that, when two fluids are introduced through said T-shaped coupling, said fluids are intermixed as they are pushed down said fin before exiting said cylinder.

29. (Withdrawn) An automatic veterinary medicament delivery system, for delivery of fluid medicaments to an individual fowl, ovine or other animals, comprising:

- a) a hand-held injection device for a source of medicament;
- b) tubing interconnecting said injection device and source of medicament;
- c) a pump, in fluid communication with both said injection device and said source of medicament, for forcing the medicament through said tubing from said medicament source to said injection device for delivery;
- d) means for powering said pump;
- e) means for precisely controlling the amount of medicament administered;
- f) means for readily indicating when an injection is taking place;
- i) means for indicating when the medicament fluid level is low;

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- j) means for preventing inadvertent injection by a user of the system; and
- k) means for automatically delivering two medicaments for injection simultaneously by the system.

30.(Canceled).

31. (Withdrawn) A method of delivering two medicaments simultaneously without mixing the medicaments, further comprising the steps of:

- a) providing an automatic veterinary medicament delivery system of claim 1,
- b) installing a second pump, interconnected by drive shaft to a first pump;
- c) interconnecting tubing between each medicament and their respective pump; and
- d) interconnecting tubing between said pumps and a hand-held injection device of claim 20.

32. (Withdrawn) A method of delivering two medicaments simultaneously without mixing the medicaments, further comprising the steps of:

- a) providing an automatic veterinary medicament delivery system of claim 1;
- b) installing a second control unit with an additional pump mounted thereon;
- c) interconnecting tubing between each medicament and their respective pump; and
- d) interconnecting tubing between said pumps and a hand-held injection device of claim 20.

33. (Withdrawn) A method of delivering two medicaments simultaneously, further comprising the

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steps of:

- a) providing an automatic veterinary medicament delivery system of claim 1;
- b) installing a second pump, interconnected by drive shaft to a first pump;
- c) interconnecting tubing between each medicament and their respective pump; and
- d) interconnecting tubing between said pumps and a mixing tube and hand-held injection device of claim 18, 19 or 21.

34. (Currently amended) An automatic veterinary medicament delivery system, for delivery of at least one fluid medicament to an individual fowl, ovine, [[procine]] or other animal within a group, comprising:

a) [[e]] a hand-held injection device for delivery of the medicament through a hollow needle is housed within a head portion of said [gun] device;

b) [[f]] said injection device further including a housing with a head portion and a handle portion, said portions being pivotally connected

c) [[g]] a source of medicament;

d) [[h]] means for measuring the amount of medicament delivered;

e) [[i]] tubing interconnecting said [[gun]] device and said source of medicament;

f) [[j]] a self-priming peristaltic pump, external to said [[gun]] device , in fluid communication with both said [[gun]] device and said source of medicament, for forcing the medicament through said tubing from said medicament source to said [[gun]] device for delivery; and

g) [[k]] means for powering said pump.

35. (Original) The system of claim 34, further comprising a spring-loaded retractable safety interlock adjacent said needle wherein spring biasing means urges said safety interlock into

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a first position extending longitudinally at least as far as the tip of said needle and means are further provided for overcoming said spring biasing means, urging said safety interlock into a second position wherein said needle is extended longitudinally beyond said safety interlock and closing an electrical switch which actuates said pump causing release of fluid through said needle.

36. (Original) The system of claim 35, wherein a trigger is mounted on the housing, said trigger in electrical communication with the pump and in conjunction with the safety interlock switch, wherein when said trigger is depressed, said safety interlock is biased to a second position actuating said switch and completes the electrical circuit and actuates said pump to power the injection device to deliver medicament to the animal or fowl to be injected, said trigger deterring accidental self-injection.
37. (Original) The injection device of claim 34, wherein said housing, having said head portion and said handle portion with said pivot, may be adapted for a linear alignment of said head portion and said handle portion to facilitate different positions for delivery of medicament such that re-positioning said housing changes the angle of injection.
38. (Currently Amended) A method of delivering a fluid medicament to an individual fowl, ovine, porcine, or other animal within a group, comprising the steps of:
- a) providing a generally cylindrical, valve-free, hand-held injection device having[[a]] at least one hollow needle for injecting a liquid;
 - b) interconnecting said injection device with tubing for fluid communication with a liquid medicament;
 - c) forcing the medicament by a pump through tubing to said injection device for

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delivery;

- d) powering said pump; and
- e) [[detering accidental self-injection by a user of said injection device]] mounting a head lamp on said injection device for illuminating the area of injection.

39. (Currently amended) The method of claim 38, wherein said method of deterring accidental self-injection of user further includes the steps of:

- a) [[providing a headlamp on a first end of said hand-held injection device to aid user in observing what is being injected;]]
- [[b]] providing a two-step injection process that must be completed before injection takes place, further comprising:
 - [[a]] i) injecting said hollow needle fully into subject animal; and
 - ii) depressing a trigger on said hand-held injection device handle.

40. (Original) The method of claim 38, wherein said method of deterring accidental self-injection of user further includes the step of providing an emergency stop button on said hand-held injection device.

41. (Original) The method of claim 38, wherein said method of deterring accidental self-injection of user further includes the step of providing a safety interlock, mounted on a proximal surface of said hand-held injection device, said safety interlock extending longitudinally therefrom to a point even with said needle tip, said safety interlock urged to a second position, in response to said hand-held injection device being positioned adjacent an animal to be injected, where the needle is inserted completely in said animal body, where an extension of said safety interlock within the housing of said hand-held injection device closes a circuit actuating an injection.

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42. (Currently amended) The method of claim 38, further comprising the step of providing a control unit for precisely controlling the amount of a medicament administered, [[said control unit]] further comprising the steps of;
- a) providing a photo-optic sensor to control the volume of medicament fluid pumped by said pump;
 - b) providing a circular encoder disc, having slots formed in said encoder disc at a calibrated distance from one another around the perimeter of said encoder disc; and
 - c) providing a drive shaft, driven by said pump, for driving said encoder disc wherein said slots pass between an emitter and a receiver of said photo-optic sensor permitting calibration of the amount of said medicament dispersed.
43. (Withdrawn) A method of delivering a fluid medicament to an individual fowl, ovine, porcine, or other animal within a group, comprising the steps of:
- a) selecting a hand-held injection device from a group of such hand-held devices including:
 1. a first hand-held injection device having a trigger, in electrical communication with said pump, said trigger mounted on a dorsal surface of said device, and having an emergency stop button, as means for deterring accidental self-injection of the user, said emergency stop button also mounted on the dorsal surface, and having a head lamp mounted on the proximal surface of said device for providing illumination in low light areas and as a further warning to the user to avoid self-injection, and having an injection in progress light mounted on said housing of said device;
 2. a second hand-held injection device having a trigger, in electrical communication with said pump, said trigger mounted on a dorsal surface of said device, and an emergency stop button as means for deterring accidental self-injection of the user, said emergency stop button also mounted on the

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- dorsal surface, a head lamp mounted on the proximal surface of said device for providing illumination in low light areas and as a further warning to the user to avoid self-injection, an injection in progress light mounted on said housing of said device and an optional dye marking means for conspicuously marking an animal injected simultaneously with the injection;
3. a third hand-held injection device having a second hollow needle, mounted on a proximal surface of said device, for injection two medicaments simultaneously, a trigger, in electrical communication with said pump, said trigger mounted on a dorsal surface of said device, and an emergency stop button as means for deterring accidental self-injection of the user, said emergency stop button also mounted on the dorsal surface, a head lamp mounted on the proximal surface of said device for providing illumination in low light areas and as a further warning to the user to avoid self-injection and an injection in progress light mounted on said housing of said device;
 4. a fourth hand-held injection device having a trigger, in electrical communication with said pump, said trigger mounted on a dorsal surface of said device, and a safety interlock mounted on the proximal surface of said device as means for deterring accidental self-injection of the user, a head lamp mounted on the proximal surface of said device for providing illumination in low light areas and as a further warning to the user to avoid self-injection, an injection in progress light mounted on said housing of said device and optional dye marking means;
- b) interconnecting selected hand-held device to said pump by means of a quick connect fluid coupler for fluid connection with the system;
 - c) providing electrical connection by means of an amp electrical connector to said control unit for powering said selected hand-held injection device; and
 - d) selecting appropriate doses on said control unit to be delivered by said selected hand-

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held injection device.

Add the following claims:

44. (New) The system of claim 1, further comprising at least one hollow needle for injecting a liquid medicament.
45. (New) The system of claim 9, further comprising at least one hollow needle for injecting a liquid medicament.
46. (New) The system of claim 1, 9, 13, or 34 wherein said headlamp further comprises a light emitting diode.
47. (New) An automatic veterinary medicament delivery system, for delivery of fluid medicaments to an individual animal or fowl, comprising;
a hand-held injection device for delivery of the medicament;
a source of medicament;
tubing interconnecting said injection device and said source of medicament;
a self priming peristaltic pump, external to said injection device, in fluid communication with both said injection device and said source of medicament, for forcing the medicament through said tubing from said medicament source to said injection device for delivery;
means for powering said pump;
a container for said pump, tubing, medicament source and injection device, protecting said

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system from dirt and dust and simplifying transportation, and

a headlamp mounted on the housing of said hand-held injection device, for illumination of the area to be injected.

48. (New) The system of claim 47, wherein at least one hollow needle is housed with the head portion and in fluid communication with the medicament source.

49. (New) The system of claim 48, wherein a safety interlock solid member is adjacent said at least one needle and when urged to a second position complete an electrical circuit to actuate the pump.

50. (New) The system of claim 49, wherein a trigger is mounted on the housing, said trigger in electrical communication with the pump and in conjunction with said safety interlock, wherein when said trigger is depressed said safety interlock is biased to a second position actuating said switch and completes the electrical circuit and actuates said pump to power the injection device to deliver medicament to the animal or fowl to be injected.

51. (New) The system of claim 47, further comprising electrical wiring that is connected to both the medicament source and a signal light mounted on the injection device to signal low fluid level in the medicament source.

52. (New) The system of claim 47, further comprising means for selecting a dosage of medicament to be delivered by the injection device from a range of dosages.

53. (New) The system of claim 47, wherein the means for selecting a dosage comprises an electronic dosage control means adjacent to the pump.

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54. (New) The system of claim 53, wherein the dosage control means further comprises a photoelectric sensor that enumerates the amount of medicament being delivered.

55.(New) The system of claim 47, wherein said self-priming peristaltic pump is pre-set to reverse to retrieve unused medicament.

56. (New) The system of claim 47, wherein said self-priming peristaltic pump is pre-set to reverse at the end of each injection to eliminate drip and to ensure accuracy of dose.

57. (New) The system of claim 47, wherein said headlamp further comprising illumination means positioned adjacent said needle, for providing illumination in low-light areas and warning the user to avoid self-injection.

58. (New) The system of claim 47, wherein said container is a backpack.

59. (New) The system of claim 53, wherein the control means is an electronic dosage control system comprising:

a circular-shaped encoder disk having slots formed in the periphery thereof; and

a light source mounted adjacent said encoder disk such that light emitted from said light source shines through said slots, said emitted light sensed by said sensor in response to movement of the pump providing means for measuring amount of dose delivered by the pump.

60. (New) The system of claim 47, wherein said injection device further comprises a housing with a head portion, handle portion and a dye nozzle for delivery of said medicament to an external surface of the animal or fowl to be medicated, said dye nozzle mounted on the head portion of said injection device, a dye reservoir, in fluid communication with said dye nozzle, and an electrically powered dye pump for drawing dye from said dye reservoir into tubing for fluid

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communication with said dye nozzle for concurrent delivery of dye to mark an individual injected.

61. (New) The system of claim 47, further comprising signal lights mounted on said injection device for indicating low medicament fluid level.

62. (New) The system of claim 47, further comprising a green LED indicator light indicating injection in progress.

63. (New) The electronic dosage control panel of claim 53, further comprising a battery charge indicator light.

64. (New) The system of claim 53, wherein the electronic dosage control means further comprises an automatic digital counter to record total injections.

65. (New) The system of claim 53, wherein the electronic dosage control means further comprise a pump reverse switch.

66. (New) The system of claim 53, wherein the electronic dosage control means further comprises medicament low level indicator light.

67. (New) The system of claim 53, wherein the electronic dosage control means further comprises dye low level indicator light.

68. (New) An automatic veterinary medicament delivery system, for delivery of fluid medicaments to an individual animal or fowl, comprising:

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a hand-held injection device for delivery of the medicament;

a source of medicament;

tubing interconnecting said injection device and said source of medicament;

a pump in fluid communication with both said injection device and said source of medicament, for forcing the medicament through said tubing from said medicament source to said injection device for delivery;

electronic dosage control means for selecting a dosage of medicament to be delivered by the injection device from a range of dosages;

means for powering said pump;

a headlamp mounted on a housing of said hand-held injection device for illuminating the area to be injected;

a container for said pump, tubing, medicament source and injection device, protecting said system from dirt and dust and simplifying transportation;

wherein the electronic dosage control means comprises;

a circular-shaped encoder disk having slots formed in the periphery thereof; and

a light source mounted adjacent said encoder disk such that light emitted from said light source shines through said slots, said emitted light sensed by a photoelectric sensor in response to movement of the pump providing means for measuring amount of dose delivered by the pump.